power is sometimes lost, will be seen in examining Case V. (Worts), in which, although many gallons of water were taken into the stomach, the blood still continued to increase in specific gravity.

"Assuming that such a condition of intestinal mucous membrane exists in cholera, it gives us but little hopes of effecting much by remedies administered by the mouth, during the collapse: and experience has shown us, that very little confidence can be placed in them. The saline drinks, recommended by Dr. Stevens, must here fail, as even water is unable to be absorbed. This led to the method of injection of saline fluids into the veins; and certainly it appears that, even in the most intense stage of collapse, patients may, for a time, be restored by their employment. Unfortunately, however, the improvement has, in most cases, proved but temporary; but still enough has been seen to cause many to think that their use is strongly called for. Should they be ever again employed, I think that more attention should be paid both to the nature and quantity of the salts contained in the fluid than has hitherto been done; and a solution should be employed whose composition resembles, as much as possible, the portion of the blood which has been lost. One would be apt to think that the blood could not bear with impunity a considerable quantity of carbonate of soda in place of the phosphate; yet such a substitution, I believe, has generally been made. May not the use of improper fluids have been in part the cause of the truth of the remark quoted by Dr. Watson, in his *Lectures on the Practice of Medicine*, that, 'However it might be with pigs and herrings, *salting* a patient in cholera was not always the same thing as *curing* him.'

"Might not some agent be injected, which would tend to prevent the exosmotic action of the intestines? Certain bodies, possessing such a power on membranes, have been found. When reaction takes place, and the watery portion of the blood becomes restored, it would then seem rational to employ drinks containing small quantities of the salts; for it does not seem improbable that the saline deficiency, which must then occur, unless supplied, may tend to prevent the due action of the kidneys and other excreting organs. At this time, also, other remedies, as calomel, etc., should be given, with the intention of restoring the excretions."—*London Journ. Med.*, May 1849.

64. *Cholera—Absence of the Precursory Diarrhœa—Treatment of the Disease.*—At a meeting of the Royal Medical and Chirurgical Society, (Feb. 27,) Mr. Streeter said that he "should like to direct attention to the fact of the very large number of cases of cholera which occur without premonitory diarrhœa, and to the greater danger attending those cases; for I do not think that sufficient attention has been paid to those cases in which collapse has been ushered in without previous symptoms, and to those in which there is scarcely any vomiting and purging, and which, I believe, are universally fatal. There are a large number of cases in which the disease is ushered in without previous purging and vomiting. With reference to treatment, I think a distinction should be made between cases of collapse originating directly from the poison, and those in which premonitory diarrhœa has existed for several days, as in those cases the collapse is due partly to the poison, and partly to the exhaustion from serous evacuations. After the most careful observation, I have come to the belief that there can be no recovery except where nature or art sets up the action of vomiting; and, as to remedies, any attempt to check that process checks the mode which nature adopts to overcome the disease. We are constantly told, in reference to the progress of a patient, that all is well 'except the vomiting;' but I believe that the only successful way to produce reaction is to encourage the vomiting, and sustain it at intervals, regulated by the powers of the patient. With respect to the agent for the production of this, it seems to me to matter little; mustard and salt have been favourite remedies, and certainly the latter, from its known harmlessness, is worthy of adoption; cold water, also, will in many instances succeed; but there have been cases in which it will not keep it up, and then powerful stimuli must be employed."

Dr. Baly remarked that the subject of the relation of the precursory diarrhœa to cholera is important. The question is, whether the diarrhœa is a part of the disease, and if so, whether we can cut it short. "As far as I have observed at Millbank Prison, the diarrhœa is of three classes: in the one, there are one or

two evacuations before collapse; in the second, there is serious diarrhœa, rice water evacuations, and occasional vomiting. In both these cases, I think the diarrhœa is a part of the disease; but it seems to me impossible to stop it by the ordinary remedies. Then there is the third kind, in which at first the evacuations have not the character of rice water, and there is no vomiting or cramp. This goes on for several days, and in the early stage may be checked. The choleraic diarrhœa subsequently ensues. It appears to me that the early diarrhœa in such cases, of which I have seen several, is not a part of the disease, but predisposes to it; but this class is not very frequent; in the more frequent cases, the ordinary remedies fail in cure. As to treatment of the cholera itself, I have not met with any greater success than others, and I believe that no one will succeed till a specific be found for it. We are at greater disadvantage in cholera than in typhus fever, because the effects of the typhus poison are more under our control than those of the cholera poison. Strong stimulants, I think, are of little avail, and, generally, the less we do the better. Warmth is beneficial, but not a great degree of heat; a very moderate degree of heat is certainly good. I should also recommend the administration of cold water, not for the purpose of producing vomiting, but to dilute the blood. I have found benefit from the use of chloroform, which acts as a palliative, by relieving pain, the cramps, and vomiting."

Dr. Baly said, that he had used the injection of saline fluids into the veins in six cases, and the result was uniformly death. "In the first case, the effect of it was very encouraging; the patient previously appeared to me as if in his last gasp; in a quarter of an hour, he breathed gently, seemed in a quiet sleep, and the colour in the cheek was natural. In no other case was the effect so marked: while in all there was a return to collapse. In two cases I employed large doses of calomel; one man had five 10-grain doses and five scruple doses, and after death it was all found in his stomach, with the exception of a small portion in the duodenum."

Mr. Streeter believes that the experience in Great Britain in the former epidemic has settled the point, that the treatment by injections of salines into the veins should be abandoned. "I at one time hoped much from stimulating the skin by mustard cataplasms on the arms and over the abdomen; they reddened the skin, but produced no reaction, and this was tried in several cases. I found that, unless vomiting was produced, reaction did not occur; and this from an experience that extended over some hundreds of cases. It is, I think, important that we should treat cases of diarrhœa as if they would turn to cholera, and my prescription generally was: 1 gr. opium, 1 gr. acetate of lead, 1 gr. capsicum, 1 gr. calomel. With respect to large doses of calomel, I found no benefit arising from them. (I gave half a drachm in one instance.) I also saw phosphorus administered in two cases, and in one case a pill was found, as taken, in the stomach, and, in the other, in the appendix vermiformis."

Mr. Busk, surgeon of the Dreadnought, stated that "out of forty cases that have come under my notice, about half have terminated fatally; so that, while the cases have not been numerous, they have been very fatal, and have been generally confined to young men of muscular strength, and who had been in a condition to obtain sufficient wholesome food; the majority of them have been from colliers. In these cases, I have observed a considerable difference in the type of the disease between that now prevailing and in the previous epidemic. I refer to the greater proportional number who have not died in a state of collapse at the present time; they have generally died in a state of oppression and coma, and almost invariably with suppression of the urinary secretion. Also, in the symptoms of the disease in the state of collapse there is considerable difference; the cramps are not so severe, the coldness not so intense, and the facility with which heat is restored is much greater now than formerly. In many cases the temperature in the axilla was 96, and that under the tongue 78, showing that the blood in the lungs was cool and probably stagnating. Another difference is, the absence of perspiration, while, in 1832, the perspiration was enormous. The duration of the disease, also, was very much longer, from their not dying in a state of collapse. On the treatment, I can add nothing to the observations of Dr. Baly and others; my opinion is, that we have no treatment,

heroic or otherwise, suited to control the disease: the only thing I am certain of is, that chloroform relieves the cramps, and thus has a beneficial influence in the way of relief; but it has no other control over the disease. The chief force of the disease, at the present time, seems to fall on the kidneys; no means have had the effect of inducing secretion of the urine; turpentine epithems and frictions have alike been unsuccessful. Another point is that, after the urine has been suppressed, and when it is again passed, the first is invariably albuminous; the tubuli are usually found crammed with epithelium, and the functions of the gland are thus obstructed. The great thing here is, to excite the action of the kidneys. With regard to the pathology of the disease, I have nothing particular to offer. There is an affection, however, of the large intestine which I do not remember to have seen described. It usually occurs in the transverse arch of the colon, and consists at first of congestion of a patch of the mucous membrane, which, if the case is prolonged, seems to be followed by circumscribed gangrene. In these cases, especially, it would appear that bloody motions are passed; but motions of this character are not limited to them. Blood, in any quantity, in the motions, has almost invariably been a fatal sign. (The speaker here exhibited two specimens, consisting of the transverse arch of the colon, showing the simple ecchymosis and gangrene of the mucous membrane.) No doubt it must be very violent action which produces this extreme disorganization; the disease appears to depend upon the introduction of a morbid poison, which nature making an effort to eliminate, the attempt destroys the membrane.—*Med. Times*, March 10, 1849.

65. *Effect of Remedies in Cholera.*—In a conversation at the Medico-Chirurgical Society regarding the effects of remedies during the recent epidemic of cholora at Edinburgh, it was stated that the saline injection of the veins had been practiced in the cholera hospital in twenty-five or twenty-six cases, and that, although remarkable temporary benefit seemed sometimes to result, no patient had survived the operation more than eight days. In 1832, about 1-6th of those whose veins were injected recovered; profound collapse was, however, not always waited for, before recourse was had to the operation. The *diuretics* used on the present occasion were bitart.-potass, nitre, digitalis, colchicum, and tinct. lyttæ. Blood-letting, practiced early, was the remedy which Dr. Robertson had found most efficacious in averting the most formidable symptoms of the disease. —*Monthly Journal*, May 1849.

66. *Treatment of Asiatic Cholera by Internal and External Means.*—M. Blatin stated to the French Academy of Medicine, Jan. 23d, at great length, the principal treatment which he was in the habit of adopting in the district where he practiced. He said that, out of 225 severe cases of cholera, he had only had 44 deaths, although, out of 461 patients, equally affected with the disease, the mortality rose to 196. The internal treatment which he recommends, in the majority of cases, consists, almost exclusively, of the administration of cold water in large doses. We know the extreme thirst which torments cholera patients; and we know the ardour with which they beg for cooling drinks. The observation of this fact induced M. Blatin, after some trials, not only to satisfy the desire of the patients, but to induce them to take quantities of liquid, which would appear enormous, were we to lose sight of the vomiting and purging. Some of his patients drunk between five and six pailfuls of cold water in the day. This remedy favoured the return of heat in a very manifest manner, and assisted in modifying the secretions, with regard to their sero-albuminous character, to such an extent that, at the commencement of the treatment, the patients drank with extreme avidity. With reference to bleeding, M. Blatin thus expressed himself:—"At the commencement of the disease, moderate bleeding does not appear to me to be injurious; it has appeared to me to promote an improved state of the blood. During reaction, I have rarely ever found it necessary; this is probably due to my having watched carefully the approach and progress of that state, and not having hastened it by a stimulating plan of treatment. Leeches, which I have frequently applied to the epigastrium, have sucked but little, and have sometimes died on the place; and there has been no hemorrhage after their removal. During the algide period, I have found it